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EXAMINER				
CHUKWURAH, NATHANIEL C				
ART UNIT		PAPER NUMBER		
3721				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/563,714

**Applicant(s)**

DANIEL ET AL.

**Examiner**

NATHANIEL C. CHUKWURAH

**Art Unit**

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5 and 9-14 is/are rejected.
- 7) ☒ Claim(s) 2, 6-8, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_

**DETAILED ACTION**

***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 and 13 recite in lines 3 and 2 respectively "a means by which the chisel tool can be located proximate to the apparatus". It is unclear as to what "means" applicant is referring.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-4 and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Zankl et al. (US 3,760,491).

With regard to claim 1, Zankl discloses an apparatus (Fig. 1) capable of manipulating a

target object in an in-cell region of a vitrification plant, comprising: a base (base of upright 17) securable to a trolley (35 considered trolley); and a hydraulic arm (41) mounted on the base considered arranged and capable of being controlled remotely by a user located outside the in-cell region; wherein the arm (41) includes, at an end distal from the base, a tool coupling (45) arranged to receive a tool (21) for performing work on the target object.

With regard to claim 3, Zankl shows wherein the hydraulic arm (41) is arranged to have three degrees of movement by sliding axially by the piston (121), lifting and lowering by piston (107 Fig. 5).

With regard to claim 4, Zankl shows a hydraulic power pack (107) for raising and lowering the arm (41) with respect to the base (base of upright 17) and including hydraulic fluid that operate the cylinder (106).

With regard to claim 9, Zankl shows wherein the tool comprises a clamp (159).

With regard to claim 10, Zankl discloses a (drill) consider a chisel tool arranged for securing to a tool coupling (45) of an apparatus for manipulating a target object in an in-cell region of a vitrification plant, the apparatus comprising: a base securable to a trolley; and a hydraulic arm (41) mounted on the base considered arranged and of being controlled remotely by a user located outside the in-cell region; wherein the arm (41) includes the tool coupling (45) at an end distal from the base, the (drill) considered a chisel tool comprising: a drive unit (20) arranged to receive a chisel bit and to drive a chisel so received in a reciprocating motion; a support (18) including securing means (17) for securing the drive unit to the support; and

a coupling member (159) arranged to engage with the tool coupling (toolholder) of the apparatus for manipulating a target object to thereby hold the chisel tool in a predetermined fixed relationship with respect of the arm as shown in Figure 10A.

With regard to claim 11, Zankl shows a lifting member (106, 107) located on the support (17) for providing a means (movement) by which the chisel tool can be located proximate to the apparatus and thereafter coupled to the apparatus.

With regard to claim 12, Zankl discloses a tool capable of using a saw tool arranged for securing to a tool coupling (45) of an apparatus for manipulating a target object in an in-cell region of a vitrification plant, the apparatus comprising: a base securable to a trolley; and a hydraulic arm (41) mounted on the base considered arranged and of being controlled remotely by a user located outside the in-cell region; wherein the arm (41) includes the tool coupling (45) at an end distal from the base, the (drill) considered a chisel tool comprising: a drive unit (20) arranged to receive a chisel bit and to drive a chisel so received in a reciprocating motion; a support (18) including securing means (17) for securing the drive unit to the support; and a coupling member (159) arranged to engage with the tool coupling (tool holder) of the apparatus for manipulating a target object to thereby hold the chisel tool in a predetermined fixed relationship with respect of the arm as shown in Figure 10A.

With regard to claim 13, Zankl shows a lifting member (106, 107) located on the support (17) for providing a means (movement) by which the chisel tool can be located proximate to the apparatus and thereafter coupled to the apparatus.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Zankl in view of Antonette (US 6,082,797).

With regard to claim 5, although Zankl is silent about the type of hydraulic fluid in use, one skilled in the art knows that water is readily available as alternative hydraulic fluid, however, it would have been obvious to one skilled in the art to provide Zankl with water as the hydraulic fluid for the purpose of powering the piston cylinder to move to apparatus.

With regard to claim 14, Zankl discloses a holding tool as shown in Figure 10A arranged a tool capable of using a saw tool arranged for securing to a tool coupling (45) of an apparatus for manipulating a target object in an in-cell region of a vitrification plant, the apparatus comprising: a base securable to a trolley; and a hydraulic arm (41) mounted on the base considered arranged and of being controlled remotely by a user located outside the in-cell region; wherein the arm (41) includes the tool coupling (45) at an end distal from the base.

Zankl fails to disclose means for lifting arranged to be advanced under and engage with a lower surface of the target object and for lifting the target object when an arm of the apparatus for manipulating a target object to which the holding tool is coupled is raised; and a support back plate having a lower edge from which the means for lifting extends at a substantially perpendicular angle. Antonette teaches means (10) considered capable of engaging

a lower surface of a target object, raising the object and moving the object to a location, and a support back plate (48) substantially perpendicular.

In view of the teaching Antonette, it would have been obvious to one skilled in art to modify Zankl by providing such lifting means for the purpose of transporting an object to another location.

#### ***Allowable Subject Matter***

7. Claims 2, 6-8 and 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The pertinent prior art of record fails to teach or suggest a melter trolley, arranged to receive a canister into which a melt and a plurality of connectors which are arranged for providing cooling fluid from a fluid source external to the in-cell region to an induction furnace located in the in-cell region; and a rest member extending upwardly from the means for lifting and angled backwardly with respect to the means for lifting.

#### ***Conclusion***

8. Refer to attachment for notice of references cited and recommended for consideration based on their disclosure of limitations of the claimed invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHANIEL C. CHUKWURAH whose telephone number is (571)272-4457. The examiner can normally be reached on M-F 8:00AM-4:30PM.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nathaniel C. Chukwurah/  
Examiner, Art Unit 3721

/Rinaldi I Rada/  
Supervisory Patent Examiner, Art Unit 3721

11/18/2009